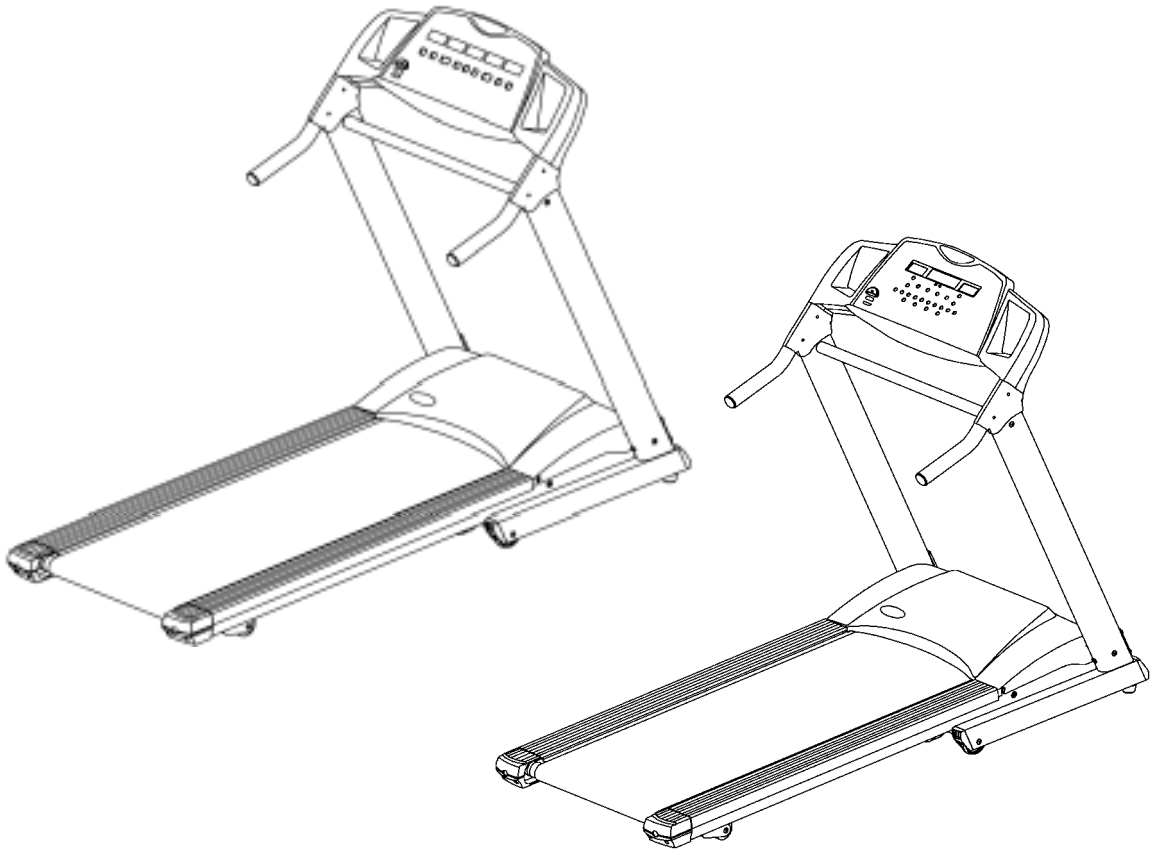
LifeFitness

Life Fitness Sport, Essential and Ballys Consumer Treadmills



Customer Support Services

SERVICE MANUAL

Life Fitness Sport and Essential Consumer Treadmills

INTRODUCTION

This service manual is applicable to Consumer Folding Treadmill. Information in this manual represents typical configuration and may differ slightly from actual equipment. The Service Manual provides recommendations for safe and efficient approaches to problem situations. This manual consists of:

Section I
- ❑ TROUBLESHOOTING

Section II
- ❑ DIAGNOSTICS

Section III
- ❑ "HOW TO…"

Section IV
- ❑ ELECTRONICS

Section V
- ❑ MISCELLANEOUS

If an operating problem should arise, turn to the TROUBLESHOOTING GUIDES and attempt to isolate what is causing the malfunction. The GUIDES are suggestions to the most probable cause.

Refer to the appropriate "How To..." which covers step-by-step procedures for the replacement or adjustment of parts. Use of basic hand tools is all that is required to perform most service procedures. If special service tools are required, then "Special Tools Required" will be listed in the title page.

FAX or call Life Fitness Customer Support Services, Monday through Friday, 8:00 AM to 5:00 PM Central Standard Time. To better assist you in a more efficient and expedient manner, please have the following information ready for the Customer Service Technician as follows:

1. Equipment model number
2. Serial number
3. Symptom of the problem
4. Part name and number to order

If you have any questions or comments please phone, mail, or fax Life Fitness at:

LIFE FITNESS COMPANY - **CUSTOMER SUPPORT SERVICES**
10601 Belmont Avenue, Franklin Park, IL 60131; USA
Telephone: 847-451-0036, Toll Free: 800-351-3737, FAX: 847-288-3702

SPECIAL SERVICE TOOL REQUIREMENTS

Unless otherwise specified, only basic hand tools are required to perform service procedures outlined in this section. Some of these standard tools should consist of: Philips and Straight-Blade Screw Drivers, Torx Set, Pliers, Rubber Mallet, Pry Bar, Snap Ring Pliers (internal and external), Standard and Metric; Allen Wrenches, Socket Sets, and Hand Wrenches.

Specialized tools will be listed after the sub-heading **Special Service Tools:**, which appears below the Service Procedure Heading at the top of the page. If no specialized tools are required, then the title would read: **Special Service Tools: NONE**, which means that standard hand tools should be employed to provide service to the product.

Specialized tools must be used to ensure safe and effective service procedures. Improvisation or attempts to use any other tool could result in unnecessary damage to the equipment or personal injury.

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SECTION I

TROUBLESHOOTING GUIDES

Life Fitness Sport and Essential Consumer Treadmills

TROUBLESHOOTING

Malfunction	Probable Cause	Corrective Action
No Power.	On/Off switch.	Turn the switch to the ON position.
	Insufficient power source.	Refer to the Operation Manual.
	Damaged line cord.	Replace line cord.
	Line cord improperly seated in socket.	Inspect power connection at wall outlet and at machine for proper contact.
Unit resets randomly or pauses. Or console buttons are not responding when depressed.	Insufficient power source.	Refer to the Operation Manual.
	Line cord improperly seated in electrical outlet.	Inspect power connection at electrical outlet and at machine for proper contact.
	Loose or damaged cable connections at display console or motor controller.	Disconnect and reconnect cable at motor controller and console. Replace cable if necessary.
	Open ground path.	Using multi-meter, check all points for continuity: console mounting screws, handlebar screws, and upright post screws to frame with respect to ground. Ground must be a non-painted surface.
Display reads: Err 1- speed sensor error	Motor speed is not correctly feed back to the controller and console.	Clean sensor of dust Change sensor cable Change communication cable Change console Replace controller.
Display reads: Err 2 – over speed error	Belt had moved before motor actually move.	Turn power off and on again to reset.
	User is pushing hard on the running belt.	Turn power off and on again to reset.
	Controller is damaged.	Replace controller.
Display reads: Err 3 – safety tether key error	Safety Key does not have positive contact.	Check positive contact of the safety key to the console. Replace safety key.

TROUBLESHOOTING

Malfunction	Probable Cause	Corrective Action
Display reads: Err 5– incline motor error	Lift actuator not calibrated.	Refer to Incline Motor “How To…” procedure.
	Incline motor is over-loaded or over-heated.	Simply wait until the incline motor has returned to normal temperature then try again.
	Lost connection of incline motor sensor cable.	Check sensor connection cable of incline motor. Replace sensor connection cable. Replace incline motor.
Display reads: Err 11 – communication error	Communication cable does not have a good connection.	Check or replace cable between console and controller.
	Insufficient power source.	Refer to the Operation Manual.
Knocking sound at rear of machine.	Faulty rear roller bearings.	Replace rear roller assembly.
Knocking sound coming from deck.	Cushions not positioned correctly and/or loose mounting hardware.	Reposition or tighten cushions.
Rubbing sound from underneath machine.	Foreign objects may be stuck underneath the machine.	Inspect underneath running belt and machine. Remove any debris or objects that may cause interference with the treadmill.
Squeaking noise.	Drive motor belt may be worn or misaligned.	Replace drive motor belt. See How To… Replace Drive Motor Belt.
Loud groaning sound heard from front of machine while inclining.	Incline mechanism pivot points or incline screw are dry.	Lubricate pivot or incline screw with grease.
	Faulty Incline motor.	Replace the Incline motor. See How To…Replace Incline Motor.
The Running Belt is traveling beyond the tracking limits.	Running belt needs to be re-tensioned or tracking needs adjustment.	Refer to belt tensioning or tracking adjustment procedure in operation or service manual.
	Worn running belt or user pushing belt.	Center running belt according to belt centering technique. See How To…Adjust And Tension The Running Belt.

TROUBLESHOOTING

Malfunction	Probable Cause	Corrective Action
Running Belt slips during footfall.	Running belt slips on front roller during stall test.	Check running belt & re-tension as necessary. See How…To Adjust Belt Tension.
Maximum speed is reduced.	User is pushing running belt.	Instruct users not to push running belt in either direction.
	Running belt needs lubrication.	Put silicone on deck.
Display reads a continuous heart rate.	RF interference.	Move machine to a different location.
No Chest Strap detected (if equipped).	Chest strap sensors not making good contact with body of user.	Adjust chest strap and moisten sensors to make better contact with skin.
	User is out of monitoring range.	Move within 3 ft (1 meter) of receiver.
	Loose connection at receiver.	Check connection on receiver.
	Faulty chest strap.	Replace chest strap.
	Faulty receiver.	Replace receiver in the console board.

SECTION II

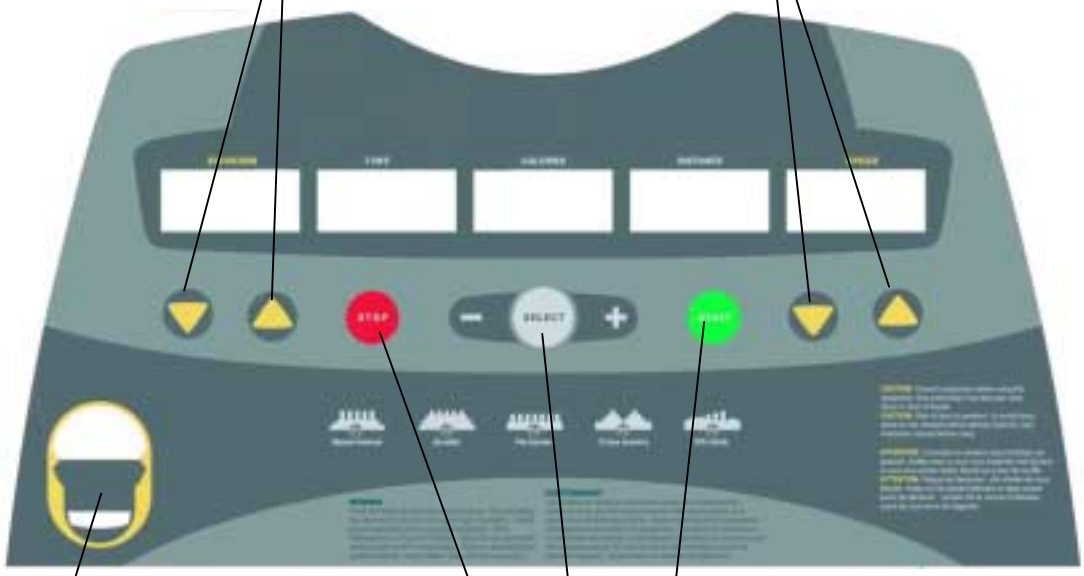
DIAGNOSTICS

Life Fitness Sport and Essential Consumer Treadmills
T810 CONSOLE

DISPLAY VALUES

Elevation	0 – 10% grade	1% increment
Time	0:00 to 59:59	One second increment
Calories	0 – 999 calories	One calories increment
Distance	0 – 99.9 Km	0.1 Km increment
Speed	1 – 16 Km/H	0.1 Km/H increment

FUNCTION KEYS



Up / Down - Adjusts elevation up and down.

Fast / Slow - Adjusts speed

Stop – slows the running belt slowly to a complete stop.

Start – activates and slowly increases the speed of the running belt until reaches your set training speed.

Safety tether key – For emergency stop only. It will cut off main power immediately.

Select – chooses one of four modes: program mode, distance based mode, calories based mode, and time based mode.
+/- keys selects program or sets training target value

TRAINING WITHOUT PRESET PROGRAM
Once the power is turned on and the safety key is secured in place, you will see all values display zero. Select one of the following methods to workout with your treadmill.

QUICK START
Manually controlled workout. No time limitation. Speed preset at 1Km/H at 0% elevation. During workout, user may adjust speed and or elevation. Simply press START, after a three second count down, treadmill will pick up speed. NOTE: Once the power is on and the safety tether key is secured in place, simply press the green start button, and a three second count down will activate and maintain the running mat at 1Km/H.

MANUAL MODE
Manually controlled workout. No time limitation. User set speed and or elevation. During workout, user may adjust speed and or elevation, then press START. After a three second count down, treadmill will pick up speed.

TRAINING WITH USER SET TARGETS
Users have the option to set training target to achieve their fitness goals. Users may set targets with distance, calories or time. This type of workout has speed preset at 1Km/H and elevation at 0% grade. During workout user may adjust speed and or elevation.

Target Distance
User set workout with target distance.
Maximum target distance: 99.9 Km.

Target Calories
User set workout with target calories.
Maximum target: 999 calories.

Target Time
User set workout with target length of time.
Maximum target: 60 minutes.

TO WORKOUT WITH TARGET SETTING MODES:
1. Turn on the power
2. Secure the safety key in place
3. Press SELECT to choose time or distance or calories mode
4. Use + - key to set the target value
5. Press START to activate treadmill
6. After a three second count down, treadmill will pick up speed

TRAINING WITH PERSET PROGRAMS
There are five pre-set programs. Each program is 30 minutes long, divided into 15 segments each 2 minutes long.

User may select intensity level of the workout by selecting the top speed in speed-based programs or the top elevation in the elevation-based programs.

Speed programs – workout will vary by speed according to preset profile. During data entry, user may adjust top speed, which is preset at 10 Km/H. During workout, user may adjust elevation, but not speed.
- P1 – Speed interval
- P2 – Weight loss

Elevation programs – workout will vary by elevation according to preset profile. During data entry, user may adjust top elevation, which is preset at 8% grade. During workout, user may adjust speed, but not elevation.
- P3 – Fat burner
- P4 – Cross country
- P5 – Hill climb

TO WORKOUT WITH PRE-SET PROGRAMS:
1. Turn on the power
2. Secure the safety key in place
3. Press SELECT until P1 shows
4. Use + - keys to choose the desired program: P1 – P5
5. Use □□ to adjust the intensity level (top speed or maximum elevation) if the preset is not appropriate
6. Press START to activate treadmill
7. After a three second count down, treadmill picks up speed

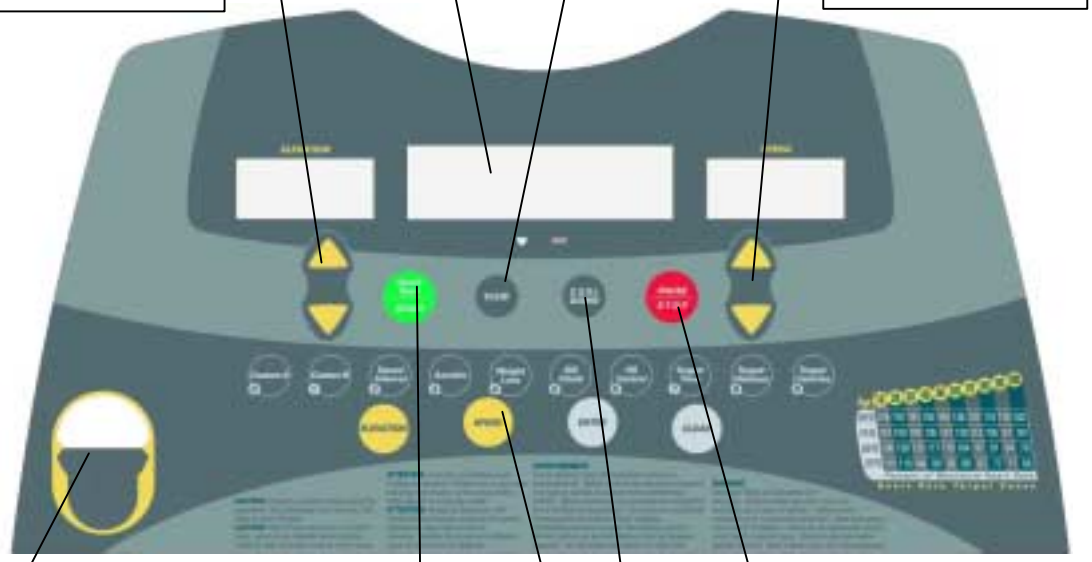
NOTE: This model is not designed for therapeutic purposes. Calories consumption values displayed on the console are motivational values only.

Life Fitness Sport and Essential Consumer Treadmills
T830 CONSOLE

DISPLAY VALUES

Elevation	0 – 10% grade	1% increment
Time	0:00 to 59:59	One second increment
Calories	0 – 999 calories	One calories increment
Pulse	40 – 240	One pulse beat increment
Distance	0 – 99.9 Km	0.1 Km increment
Speed	1 – 16 Km/H	0.1 Km/H increment

FUNCTION KEYS



Message board – gives user instructions during programming and workout

View – SCAN or displays Time, Distance, Calories, Pulse, or % of maximum heart rate.

Up / Down - Adjusts elevation up and down.

Fast / Slow - Adjusts speed

Safety tether key – For emergency stop only. It will cut off main power immediately.

Stop – slows the running belt to a complete stop.

Cool down -- interrupts the current workout and go directly into a four minute cool down routine

Quick Start – manual workout
Start – to activate treadmill

Pre-set programs – 2 custom programs, heart rate control, elevation and speed programs…

The heart rate control console presents many user-friendly features. There are displayed messages to guide you through every step of the programming and workout.

NOTE: To view pulse or % of maximum heart rate, you must wear the heart rate transmitter chest strap.

METRIC TO MILES
You have the option to change from miles to Km and vise versa by pressing FAST + SLOW + 0 (three keys at the same time).

WIRELESS HEART RATE CONSOLE
The treadmill features wireless heart rate monitoring, the most advanced technology to date for accurate read out of your heart beat. You must wear the heart rate transmitter chest strap so that the contact surface is next to your skin directly under your heart to pick up the pulse signals from your heart. To ensure positive readout, make sure the contact surface is moist. When the console picks up your heart beat signal, the little heart under the viewing screen will light up and blink to your heartbeat.

PERCENT OF MAX HEART RATE
For this information to display on the viewing screen, you must wear the heart rate transmitter chest strap and also accurately enter your age. Maximum heart rate is based on the calculation of 220 minus your age. Then based on the pulse picked up from your chest strap, the console will calculate your heart beat as a percent of your maximum heart rate. This is the best indication of how hard you are working your heart and lungs.

VIEW
During workout, the viewing screen will show a track making progress as well as time counting down. This gives you a visual as well as a numeric value of how much time is remaining of your workout. Any time during the workout, you may also choose to view other data. You may SCAN all values or chose to view: Time, Distance, Calories, Pulse, or percent of maximum heart rate. Speed and Elevation will be on constant display.

COOL DOWN
Whenever you are ready to stop your workout, even if you are in the middle of a program, be sure to use the COOL DOWN program. When the cool down button is pressed, it will automatically interrupt the current workout and go directly into cool down routine, which is programmed for four minutes. The first two minutes will reduce speed and elevation to about 50% of your last setting. The last two minutes will reduce speed and elevation about another 50%.

SPEED ADJUSTMENTS
During workout, for minor adjustments, use FAST and SLOW buttons to change at increments of 0.1 Km/H. Or you may press SPEED and use numeric keys to enter the new speed value. Then press ENTER to accept the new value.

ELEVATION ADJUSTMENTS
During workout, for minor adjustments, use UP and DOWN buttons to change at increments of 0.5% grade. Or you may press ELEVATION and use numeric keys to enter the new elevation value. Then press ENTER to accept the new value.

PAUSE
If STOP key is pressed during workout, the program is suspended. The display will show “workout stopped” and start to count down from three minutes. During pause no keys other than STOP and START will function. If user presses START during pause (within three minutes), then program resumes where it was stopped. If user presses STOP again during pause, program will end. Or if after three minutes without any button pressed, program will automatically end.

END OF WORKOUT
When you have completed your workout or if you have stopped your workout, the elevation will automatically return to 0% grade. Then the display will show “ CONGRATULATIONS! ” “ GOOD JOB! ”. Then it will display the totals for exercise time spent, distance, and calories burned for that workout. The workout stats will repeat twice, then console will go back to idle mode ready for the next user workout.

QUICK START
The default settings are 0% grade and speed of 1 Km/H. You may adjust the speed or elevation any time during the workout. The default time for this program is 30 minutes.

1. Turn power on
2. Check safety key and clip – ensure clip secured to clothing
3. Press START for quick start
4. Use numeric keys to enter your age
5. Press ENTER to confirm and begin workout

CUSTOM PROGRAM A & B
The first time you use this workout, you must program the routine. We have 15 recordings to memorize elevation and speed settings. In addition, we also memorize your age and workout time.

To program your personal exercise routine:
1. Turn power on
2. Check safety key – ensure clip secured to clothing
3. Press 0 for program A or 1 for program B.
4. Display will show program selected
5. Press ENTER to confirm
6. Use numeric keys to enter your age.
7. Press ENTER to accept.
8. Use numeric keys to enter workout time.
9. Press ENTER to accept.
10. Press START to begin workout.
11. Workout will start at 0% grade and 1 Km/H. You may adjust speed and elevation throughout your workout.
When your workout time is up, treadmill will memorize all your workout settings and repeat this routine when this program is selected again.

There are two ways to clear the custom program workout routine.
Option 1 – clears old routine and sets new routine at the same time:
Just change the workout time will alert the computer to erase the previous programmed routine. At this time, you may adjust your workout routine, at the end of the workout, it will memorize the new routine when this program is selected again.

Option 2 – clears old routine only:
1. Select the program that you wish to clear (A or B)
2. Press CLEAR, the display will show “clear program? No”
3. Press CLEAR the second time, display will show “clear program? Yes”
4. Press ENTER at this time, memory will be cleared.

SPEED PROGRAMS: Speed interval or Aerobic
During speed programs, only speed will automatically adjust according to pre-set profile. If you wish to adjust elevation, you may do so any time during workout. However, you will not be able to adjust speed during the speed program.

1. Turn power on
2. Check safety key – ensure clip secured to clothing
3. Press 2 for speed interval or 3 for aerobic
4. Display will show workout profile of the program selected
5. Press ENTER to accept
6. Use numeric keys to enter your age.
7. Press ENTER to accept.
8. Use numeric keys to enter workout time.
9. Press ENTER to accept.
10. Use numeric keys to set maximum speed. Note: all speeds will be scaled down accordingly for the entire program.
11. Press ENTER to confirm.
12. Press START to begin workout

ELEVATION PROGRAMS: Weight loss or Hill climb
During elevation programs, only elevation will automatically adjust according to pre-set profile. If you wish to adjust speed, you may do so any time during workout. However, you will not be able to adjust elevation during the elevation program.

1. Turn power on
2. Check safety key – ensure clip secured to clothing
3. Press 4 for weight loss or 5 for hill climb
4. Display will show workout profile of the program selected
5. Press ENTER to accept
6. Use numeric keys to enter your age.
7. Press ENTER to accept.
8. Use numeric keys to enter workout time.
9. Press ENTER to accept.
10. Use numeric keys to set maximum elevation. Note: all elevations will be scaled down accordingly for the entire program.
11. Press ENTER to confirm.
12. Press START to begin workout

HEART RATE CONTROL PROGRAM
After you have set your program according to the steps below, the treadmill will activate according to your warm up speed for the duration that you have requested. Treadmill will automatically adjust by speed or elevation to achieve and maintain your target heart rate. After the warm up time, it will take about 3-5 minutes to reach your target heart rate. Your heart rate will be maintained at +/- 5 beats of your target heart rate.

When the console picks up your heart beat signal, the heart under the viewing display will light up and blink. When you have reached your target heart rate, the HRC next to the heart will light up.

1. Turn power on
2. Check safety key – ensure clip secured to clothing
3. Press 6 for heart rate control program
4. Display will show program selected
5. Press ENTER to accept
6. Use numeric keys to enter your age.
7. Press ENTER to accept.
8. Use numeric keys to enter workout time.
9. Press ENTER to accept.
10. Use numeric keys to enter warm up time.
11. Press ENTER to accept
12. Use numeric keys to enter warm up speed.
13. Press ENTER to accept
14. Use numeric keys to enter your target heart rate. Note: you cannot input a value that is greater than your maximum heart rate.
15. Press ENTER to confirm.
16. Press START to begin workout

TARGET SETTING PROGRAMS
You may choose to workout by setting targets with Time, Distance, or Calories. All workouts by target have default settings of 0% for elevation and 1 Km/H for speed. You may adjust the speed or elevation any time during the workout. During workout, display window will default to show target counting down. Once you have reached your target, workout will automatically stop.

TARGET BY TIME
1. Turn power on
2. Check safety key and clip – ensure clip secured to clothing
3. Press 7 to select target by time.
4. Display will show program selected.
5. Press ENTER to confirm.
6. Use numeric keys to enter your age.
7. Press ENTER to confirm.
8. Use numeric keys to enter workout time.
9. Press ENTER to confirm.
10. Press START to begin workout.

TARGET BY DISTANCE
1. Turn power on
2. Check safety key and clip – ensure clip secured to clothing
3. Press 8 to select target by distance.
4. Display will show program selected.
5. Press ENTER to confirm.
6. Use numeric keys to enter your age.
7. Press ENTER to confirm.
8. Use numeric keys to enter target distance.
9. Press ENTER to confirm.
10. Press START to begin workout.

TARGET BY CALORIES
1. Turn power on
2. Check safety key and clip – ensure clip secured to clothing
3. Press 9 to select target by calories.
4. Display will show program selected.
5. Press ENTER to confirm.
6. Use numeric keys to enter your age.
7. Press ENTER to confirm.
8. Use numeric keys to enter target calories.
9. Press ENTER to confirm.
10. Press START to begin workout.

SECTION III

How To...
SERVICE AND REPAIR GUIDES

Life Fitness Sport and Essential Consumer Treadmills

How To… Replace the Running Belt and Deck

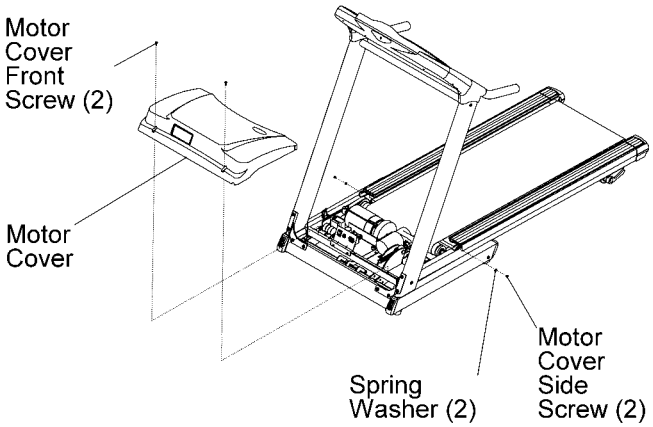
Special Service Tools Required: NONE

1. At the power switch, turn OFF the unit, and then unplug the line cord at the wall outlet.

2. Remove the motor cover front screws (2), side screws (2) and washers (2) of the motor cover, lift off the motor cover.

3. Fold the treadmill. Loosen the motor belt tensioning screws (2). Loosen the four mounting screws securing the motor to the bottom of the frame.

NOTE: to removing front roller easily, release motor belt via loosen motor belt tensioning screws (2) and the four mounting screws.

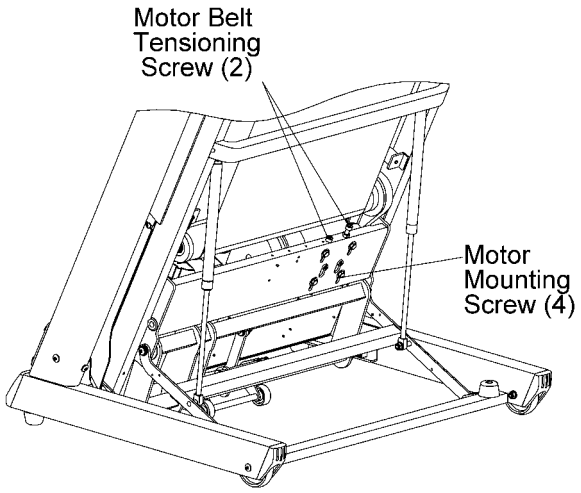


4. Remove the end caps by removing end cap screws (6) and end cap bolts (2) from each end cap.

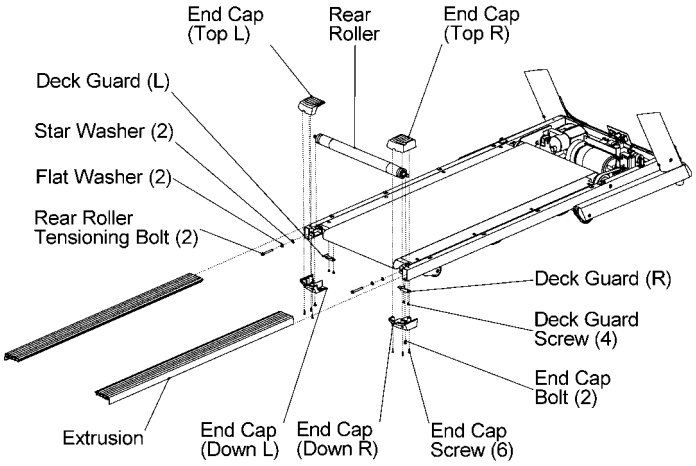
5. Remove the deck guards (2) by removing deck guard screws (4) and set aside to be remounted on the new deck.

6. Carefully lay the treadmill over onto it's side and remove the gas shocks by removing gas shock nuts (4) and flat washers (4) from each other.

   CAUTION: for safety purposes, remove gas shocks to avoid injury when lifting off the deck. Without the weight of the deck, gas shocks will spring up and create a safety hazard.



7. With the gas shocks removed carefully position the unit back to a folding position, release the Locking Mechanism and unfold the treadmill.



How To… Replace The Running Belt and Deck - Continued

Special Service Tools Required: NONE

8. Remove the rear roller tensioning bolts (2), flat washers (2) and star washers (2). Slide each extrusion back.

9. Remove the rear roller.

NOTE: Remove the Rear Roller out from under the Striding Belt just enough to mark the end of the shaft so that it can be re-installed in the same way to maintain the same bearing wear pattern. Using a felt-tip marker, mark the letter "L" or "R".

10. Slide the motor assembly toward the front roller assembly to release drive belt tension.

11. Remove the front roller long screw (RT side), short screw, and curve washer (LT side) from the front roller mounting brackets, then lift the front roller out from the running belt. Remove the motor drive belt from the front roller pulley.

12. Remove the deck screws (8) and lift out the deck.

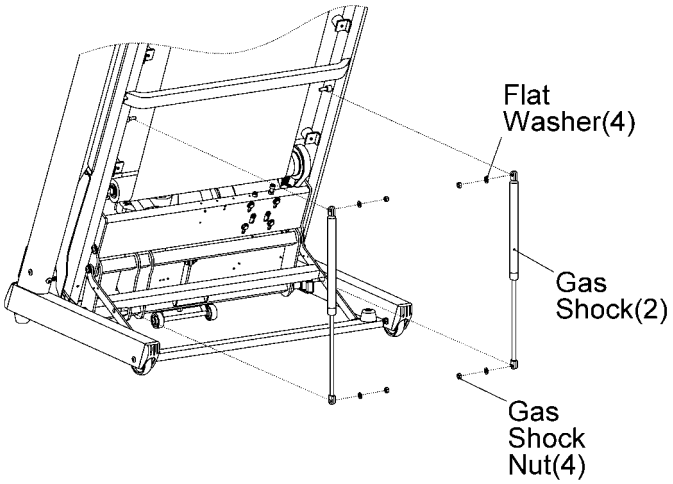
13. Remove the running belt and discard.

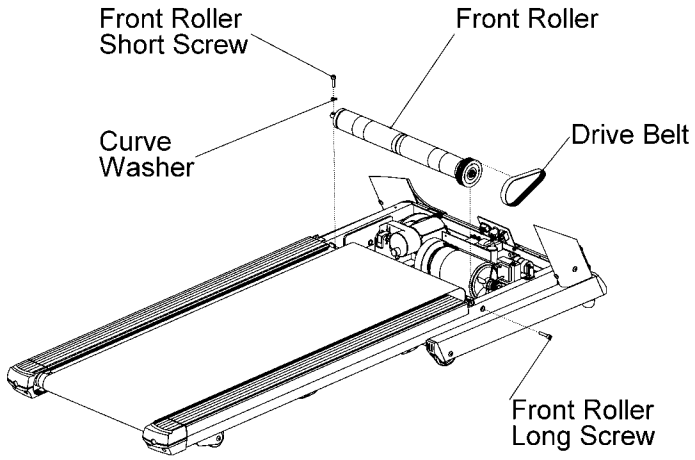
14. Install new running belt and deck. Silicon will need to be applied to the new deck. Using a syringe apply (or just pour over) silicon to the deck. Measure amount to 30ml. Starting a foot from the front center edge of the deck apply the silicon leaving the edges free of silicon.

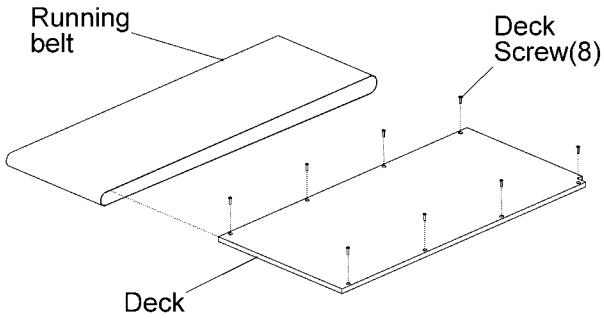
15. Make sure to reinstall deck guards on the new deck. Retention the motor drive belt to 85~95 lbs. Do not overtighten belt.

NOTE: when adjusting motor belt tension, the four mounting screws should be loosen, and then adjust motor belt tensioning screws (2) to make sure the motor drive belt to 85~95lbs.

16. Proceed to the following page for proper belt tensioning.





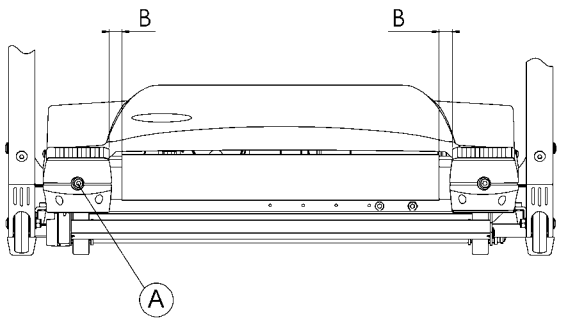


Life Fitness Sport and Essential Consumer Treadmills

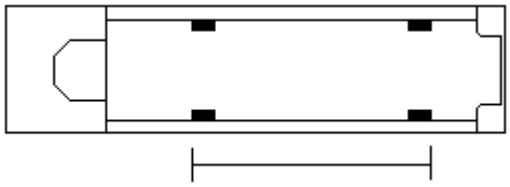
HOW TO…HOW TO ADJUST RUNNING BELT TENSION

Special Service Tools Required: NONE

1. Locate the two BELT TENSIONING BOLTS on each side of the REAR ROLLER MOUNTING BRACKETS. The TENSIONING BOLTS are accessible from the holes provided in the REAR ROLLER GUARDS.



2. Center the RUNNING BELT between the FRONT and REAR ROLLERS. After installing new RUNNING BELT, but prior to tensioning, place two pieces of tape 25'' inches apart on **BOTH** the right and left edges of the RUNNING BELT.

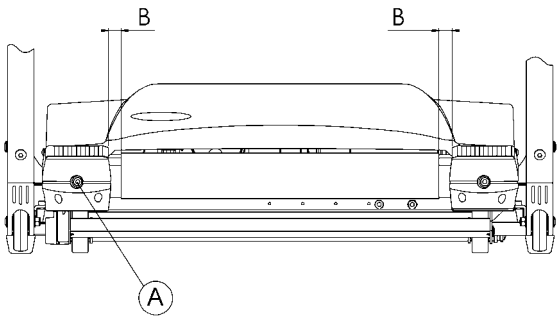


3. Alternately tighten the two tensioning bolts 1/4 turn clockwise each until the distance between the tape is 25.125'' which is the equivalent of a eighth of inch or .55% stretch.

4. Adjust the Tracking. See How To… Adjust Running Belt Tracking in this section.

Life Fitness Sport and Essential Consumer Treadmills
HOW TO… ADJUST RUNNING BELT TRACKING

Special Service Tools Required: NONE



1. After the treadmill has been installed and leveled, the belt must be checked to confirm proper tracking. First, plug the power cord into an appropriate outlet and turn the treadmill ON.

2. Press the Quick Start button then increase speed to 4.0 mph (6.4 kph) motor speed using the UP Arrow.

3. If the RUNNING BELT has moved to the **right**, turn the right TENSION BOLT 1/4 turn clockwise and the left TENSION BOLT1/4 turn counterclockwise to start the RUNNING BELT tracking back to the center of the REAR ROLLER. If the RUNNING BELT has moved to the **left**, turn the left TENSION BOLT 1/4 turn clockwise and the right TENSION BOLT 1/4 turn counterclockwise to start the RUNNING BELT tracking back to the center of the REAR ROLLER.

4. Repeat this adjustment until the running belt appears centered. The belt should be equal distance (B) on both sides of the rear roller.

5. Allow the unit to operate for several minutes to see that the belt remains centered.

6. When proper belt tension is completed work the silicon into the running belt by walking on the unit for 3 to 5 minutes covering the entire surface of the deck and running belt. Clear away any silicon that may have spread to the outside of the running belt.

NOTE: During the adjustment above, DO NOT exceed one full turn of the adjusting screws in either direction.

7. Enter the Manual program and run unit at 2 mph (3.2kph) for five minutes, ***DO NOT*** run on the **BELT**.

8. With the RUNNING BELT speed at 2 mph (3.2 kph), begin walking on the treadmill. Tightly grasp the HANDLEBARS and attempt to stall the RUNNING BELT. If the RUNNING BELT slips, continue to Step 9. If it does not slip, the tension is correct.

9. Stop the treadmill and alternately turn the RUNNING BELT TENSIONION BOLTS (A) 1/4 turn clock-wise to tension (See **Tracking (Centering) an Existing or New Running Belt** on previous page). Repeat Step 3 and Step 4 until slipping is eliminated. **DO NOT EXCEED ONE FULL TURN!**

Life Fitness Sport and Essential Consumer Treadmills

HOW TO…REPLACE THE MOTOR DRIVE BELT

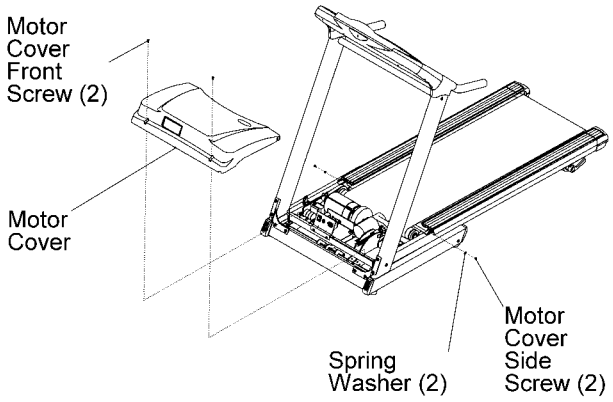
Special Service Tools Required: NONE

1. At the power switch, turn OFF the unit, then unplug the line cord at the wall outlet.

2. Remove the motor cover front screws (2), side screws (2) and washers (2) of the motor cover, lift off the motor cover.

3. Fold the treadmill. Loosen the motor belt tensioning screws (2). Loosen the four mounting screws securing the motor to the bottom of the frame.

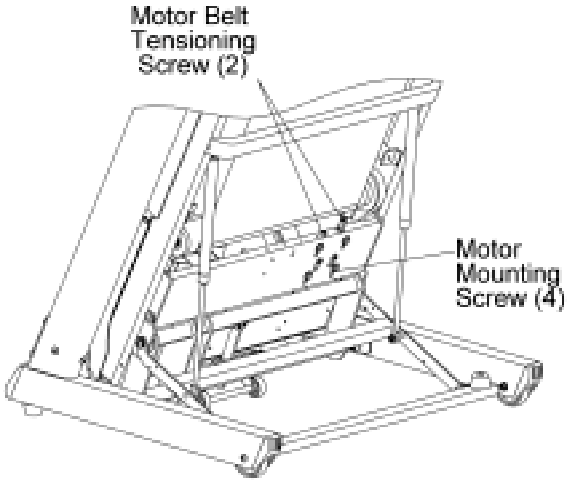
NOTE: For ease of removal, loosen motor belt tensioning screws (2) and the four mounting screws.



4. Unfold the treadmill. Move the motor mounting plate in the slotted holes towards the rear roller to relieve belt tension. Remove the motor drive belt from the end of the motor drive pulley.

5. Loosen the rear roller tensioning bolts

NOTE: Count rotation or index the rear roller location. This will aid in re-tensioning the running belt back to the original location.



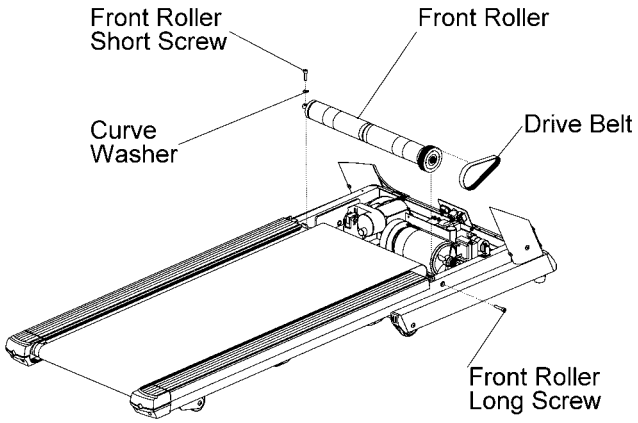
6. Remove the front roller long screw (RT side), short screw, and curve washer (LT side) from the front roller mounting brackets.

7. Slide the motor assembly toward the front roller assembly to release drive belt tension.

8. Lift the front roller out of its frame mount, slip off the motor drive belt from the pulley, and discard the belt.

9. Install new motor drive belt in reverse order. Tension the belt to 85~95 lbs.

10. Retention the running belt and reset its tracking. Refer back to running belt tension and tracking procedure in this section.



Life Fitness Sport and Essential Consumer Treadmills

HOW TO…REPLACE THE DRIVE MOTOR

Special Service Tools Required: NONE

1. At the power switch, turn OFF the unit, then unplug the line cord at the wall outlet.

2. Remove the motor cover front screws (2), side screws (2) and washers (2) of the motor cover, lift off the motor cover.

3. Remove the speed sensor cable by removing speed sensor screws (2) and washers (2). Set the speed sensor cable aside to be remounted on the new motor.

4. Disconnect all connectors from the motor (Please refer to WIRING DIAGRAM – Section IV, page 9).

5. Fold the treadmill. Remove the motor belt tensioning screws (2), Remove the four motor mounting screws.

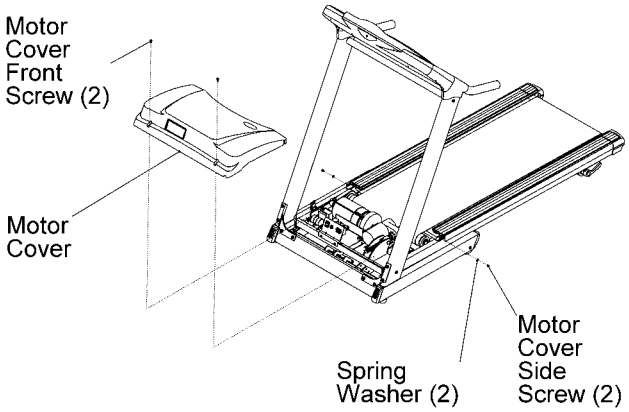
NOTE: When removing the last mounting screw, you will need to support the drive motor assembly in case the motor drops on the floor.

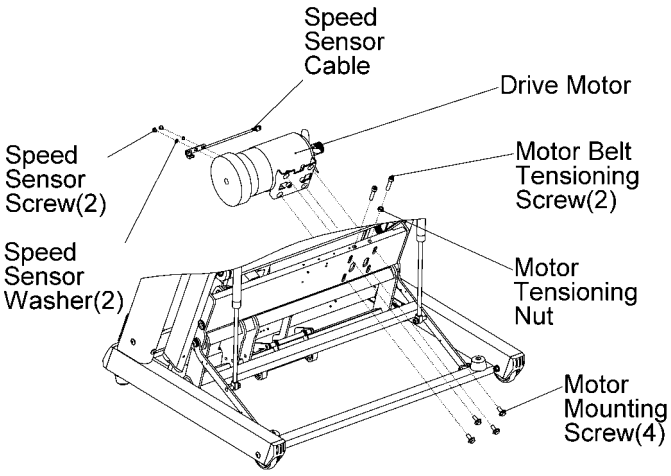
6. Unfold the treadmill. Move the motor mounting plate towards the rear roller to relieve belt tension. Remove the drive motor belt off the end of the pulley.

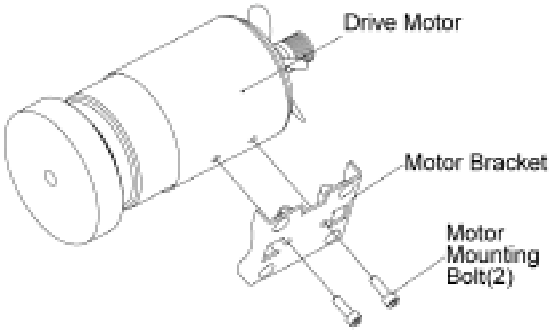
7. Lift out the motor.

8. Remove the motor mounting bolts (2) and discard the motor. Set the motor bracket aside to be remounted on the new motor.

11. Install new drive motor in reverse order making sure to properly adjust the motor drive belt (85~95 lbs.) (See section 3 page 3) and running belt. (See how to replace running belt and deck.)







Life Fitness Sport and Essential Consumer Treadmills

HOW TO…REPLACE THE FRONT ROLLER

Special Service Tools Required: NONE

1. At the power switch, turn OFF the unit, then unplug the line cord at the wall outlet.

2. Remove the motor cover front screws (2), side screws (2) and washers (2) of the motor cover, lift off the motor cover.

NOTE: Count rotation or index the rear roller location. This will aid in re-tensioning the running belt back to the original location.

3. Loosen the rear roller tensioning bolts to slacken the running belt.

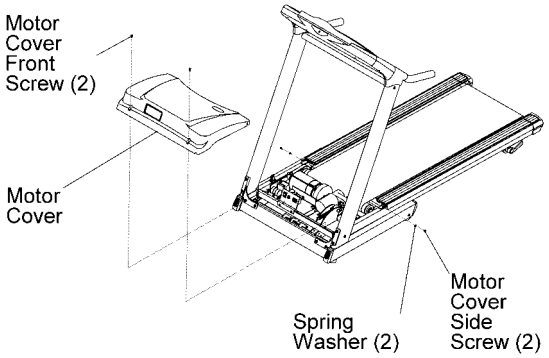
4. Fold the treadmill. Loosen the motor belt tensioning screws (2). Loosen the four motor mounting screws.

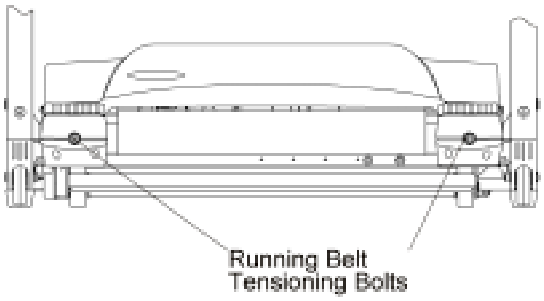
NOTE: To remove front roller easily, release motor belt via loosing motor belt tensioning screws (2) and the four mounting screws.

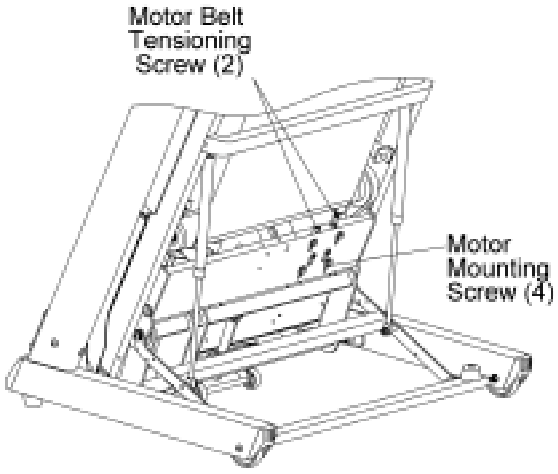
5. Unfold the treadmill. Move the motor mounting plate towards the rear roller to relieve belt tension. Remove the front roller Long screw, short screw, and curve washer from the front roller mounting brackets.

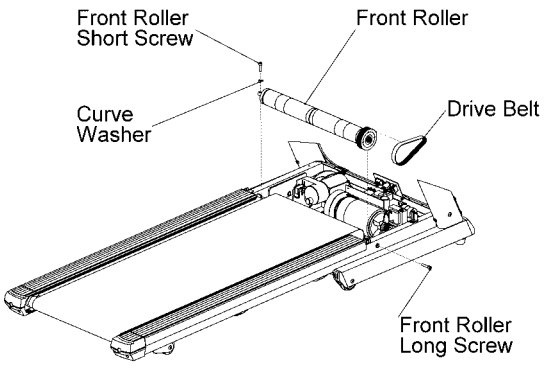
6. Lift out the front roller from the drive motor belt and carefully lift out the front roller from the running belt.

7. Install new front roller in reverse order making sure to properly adjust the motor drive belt (85~95 lbs.) (See section 3 page 3) and running belt. (See how to replace running belt and deck.)









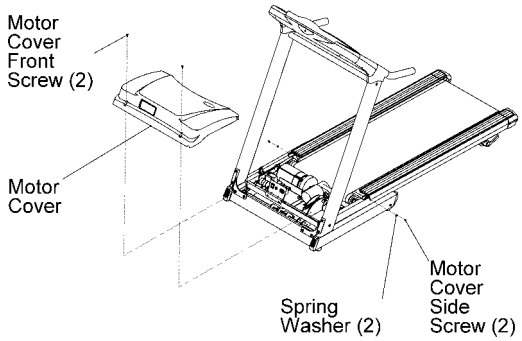
Life Fitness Sport and Essential Consumer Treadmills

HOW TO…REPLACE THE REAR ROLLER

Special Service Tools Required: NONE

1. At the power switch, turn OFF the unit, then unplug the line cord at the wall outlet.

2. Remove the motor cover front screws (2), side screws (2) and washers (2) of the motor cover, lift off the motor cover.



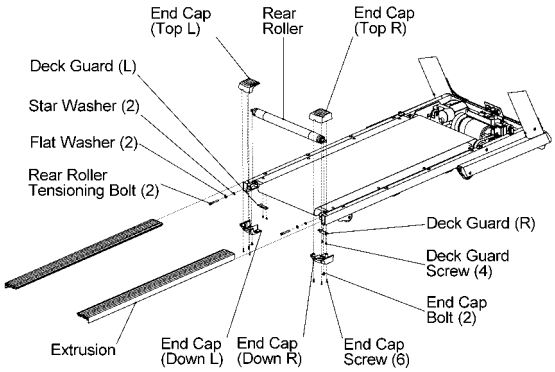
NOTE: In order to lift rear roller out, the extrusions need to be moved, allowing enough space to slide the extrusions forward.

3. Fold the treadmill. Remove the end caps by removing end cap screws (6) and end cap bolts (2) from each end cap.

4. Remove the deck guards (2) by removing deck guard screws.

NOTE: Count rotation or index the rear roller location. This will aid in re-tensioning the running belt back to the original location.

5. Unfold the treadmill. Remove the rear roller tensioning bolts (2), flat washers (2) and star washers (2). Slide the extrusions (2) towards the front roller.



6. Lift the rear roller out from the running belt.

7. Install new rear roller in reverse order of removal. Make sure to adjust the running belt tension. Refer back to belt adjustment in this section.

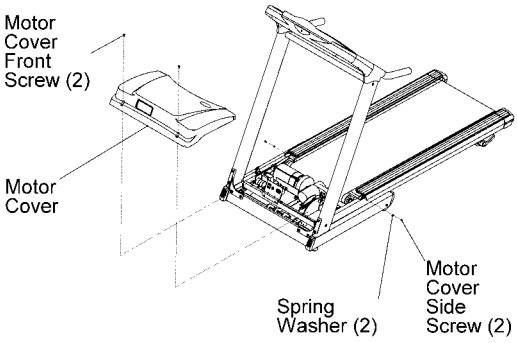
Life Fitness Sport and Essential Consumer Treadmills

HOW TO…REPLACE THE DECK CUSHION

Special Service Tools Required: NONE

1. At the power switch, turn OFF the unit, then unplug the line cord at the wall outlet.

2. Remove the motor cover front screws (2), side screws (2) and spring washers (2) of the motor cover, lift off the motor cover.

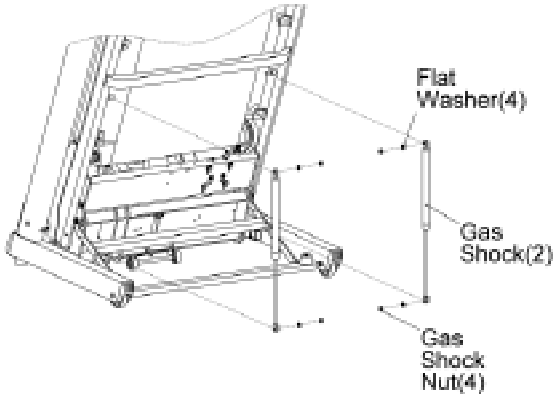


3. Fold the treadmill. Remove the end caps by removing end cap screws(6) and end cap bolts(2) from each end cap

4. Remove the deck guards (2) by removing deck guard screws (4).

5. Carefully lay the treadmill over onto it's side and remove the gas shocks by removing gas shock nuts (4) and flat washers (4) from each other.

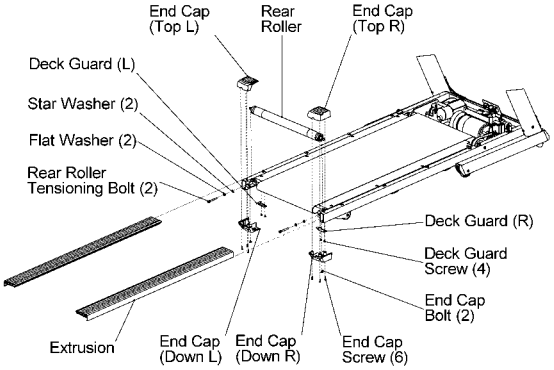
CAUTION: for safety purposes, remove gas shocks to avoid injury when lifting off the deck. Without the weight of the deck, gas shocks will spring up and create a safety hazard.



6. With the gas shocks removed carefully position the unit back to a folding position, release the Locking Mechanism and unfold the treadmill.

7. Loosen the rear roller tensioning bolts (2), flat washers (2) and star washers (2).

NOTE: Count rotation or index the rear roller location. This will aid in re-tensioning the running belt back to the original location.



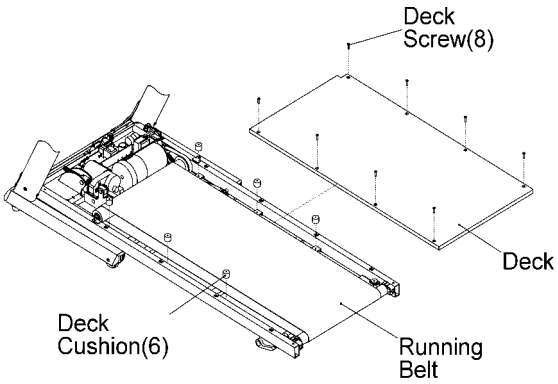
8. Slide each extrusion back.

9. Remove the deck screws (8), then lift the deck out of the running belt.

10. Remove deck cushions (6) from the frame.

11. Install new deck cushions in reverse order.

12. Retention and center the running belt as described in the beginning of this section.



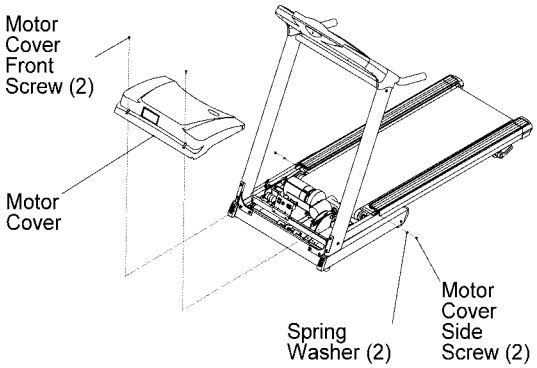
Life Fitness Sport and Essential Consumer Treadmills

HOW TO…REPLACE THE INCLINE MOTOR

Special Service Tools Required: NONE

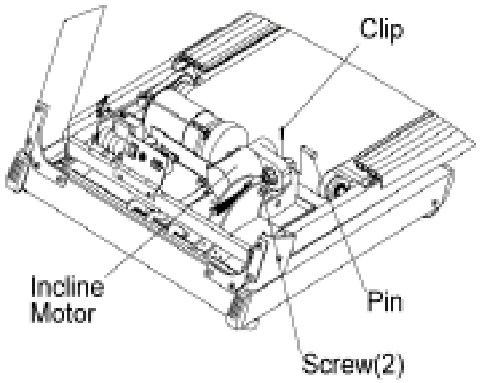
CAUTION: If treadmill is at an inclined state after the incline motor lift nut screws are removed the frame is supported only by the gas shocks

1. At the power switch, turn OFF the unit, then unplug the line cord at the wall outlet.
2. Remove the motor cover front screws (2), side screws (2) and spring washers (2) of the motor cover, lift off the motor cover.
3. Disconnect All Cable connectors from the incline motor (Please refer to WIRING DIAGRAM – Section IV, page 9).
4. Remove the left side incline nut screw.
5. Carefully remove the incline motor nut out of the right side lift nut screw.



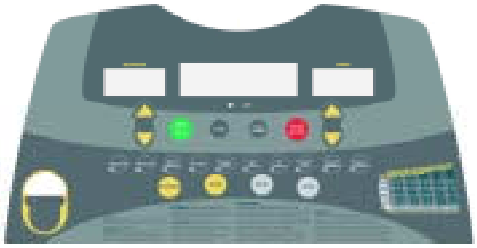
CAUTION: If treadmill is at an inclined state after the incline motor lift nut screws are removed the frame is supported only by the gas shocks.

6. If unit is at an incline, carefully lower frame placing the unit at zero incline.
7. Remove incline motor pin and clip and remove incline motor.
8. Install the new incline motor base into the frame and insert incline pin and clip. Attach all wires and connections.
9. Incline motors are shipped with the incline motor nut at 10%. Checks new incline motor. Adjust the nut location so that the distance (D) between hole to hole on the incline motor is 235.5mm.
   NOTE: Make sure D=235.5mm(9.272inch)



10. Rest the incline motor toward the front roller. Apply power to the unit. Grasp incline motor nut and through the console bring the incline motor nut to zero.

CALIBRATION



1. To calibrate power up the unit and incline the unit to 10% of incline.
2. 3 window display key stroke/ UP + DOWN + 9 keys at the same time
3. 5 window display key stroke/ STOP and ELEVATION DOWN

4. This will calibrate the incline motor. Incline motor should go all the way down to 0% grade. If no error 5 appears on the console, then the treadmill is good.

   NOTE: If error 5 appears, then it means that the controller remembers a different value, so we need to bypass the controller to calibrate the incline motor. In that case, we have to disconnect the incline sensor cable to bypass the old memory (Please refer to WIRING DIAGRAM – Section IV, page 9). Then calibration can be done properly.

5 Test unit lift functions to make sure everything is correct.

Life Fitness Sport and Essential Consumer Treadmills

HOW TO…REPLACE THE MOTOR CONTROLLER

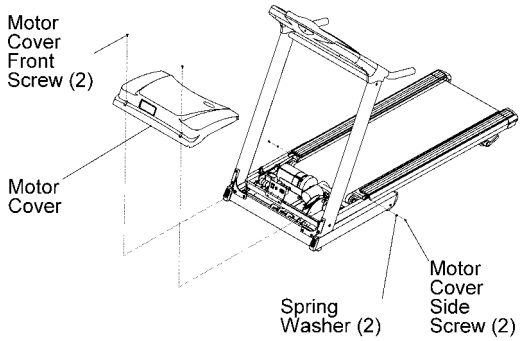
Special Service Tools Required: NONE

1. At the power switch, turn OFF the unit, then unplug the line cord at the wall outlet.

2. Remove the motor cover front screws (2), side screws (2) and spring washers (2) of the motor cover, lift off the motor cover.

3. Disconnect all electrical connectors from the motor controller board.(Please refer to WIRING DIAGRAM – Section IV, page 9)

4. Remove the power bracket by removing the power bracket screws (2).

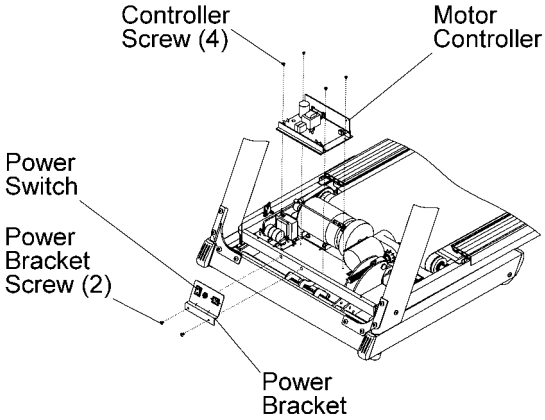


5. Remove the controller screws (4) and lift out the motor controller from the frame.

6. Install new motor controller in reverse order.

NOTE: When replacing a motor controller the incline motor must be calibrated to the new motor controller. Refer to incline motor calibration.

7. Make sure to calibrate incline motor. Refer back to incline motor calibration in this section.

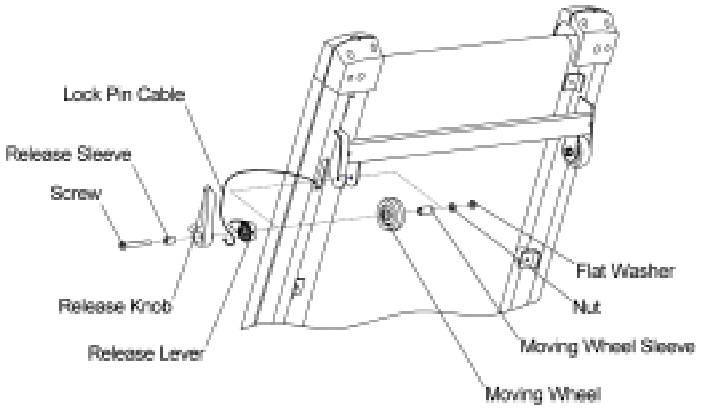


Life Fitness Sport and Essential Consumer Treadmills

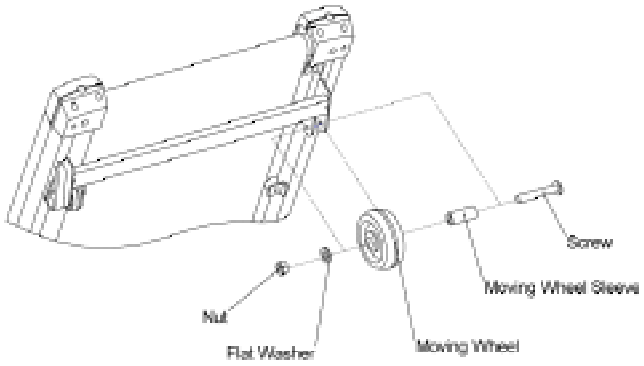
HOW TO…REPLACE THE MOVING WHEEL

Special Service Tools Required: NONE

1. At the power switch, turn OFF the unit, then unplug the line cord at the wall outlet.
2. Fold the treadmill.
3. Carefully lay the treadmill over on to the right side.
4. Remove the screw, flat washer and nut.
5. Remove the moving wheel.
6. Install new moving wheel in reverse order.



NOTE: To remove the moving wheel you will need to remove the release locking lever leaving the gas shocks as the only support of the treadmill.



Life Fitness Sport and Essential Consumer Treadmills

HOW TO…REPLACE THE CONSOLE PCB

Special Service Tools Required: Precision Phillips screwdriver

GENERAL

The Console Assembly is made up of the three parts. The front half is called the Overlay Bezel Assembly, the back half is called the Console Back Cover and when these two are split, the Control Board is attached to the back of the Overlay Bezel. The main wiring cable is routed up through the left upright and enters the left side of the console. To replace the Control Board, follow the procedure below.

1. Turn the unit power OFF at the switch, and then unplug the line cord at the wall outlet.

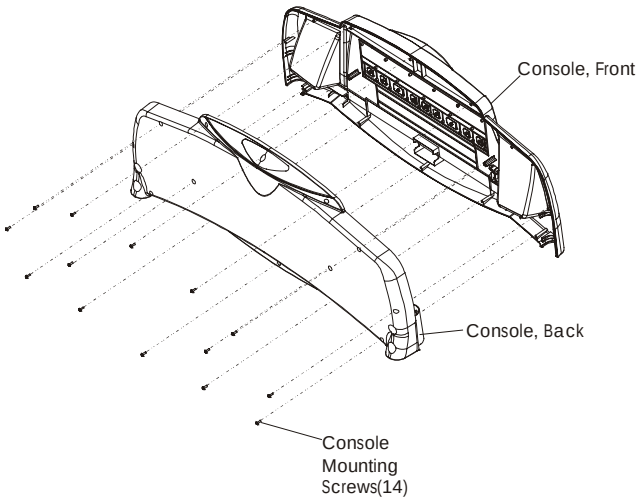
2. Remove screws (4) securing the console assembly to the right and left handlebars.

3. Carefully lift console assembly off the handlebars and disconnect the main cable.

4. Remove screws (14) from the console back cover.

NOTE: The console decal on the back of the console will need to be removed to access one of the screws.

5. Disconnect the console cable, the safety stop switch cable and the heart rate cable (if equiped) connectors from the control board.



6. Remove mounting screws (17) that attach the control board to the back of the overlay bezel.

7. Install a new control board or overlay bezel at this time.

8. Re-connect wiring and install overlay bezel in reverse order of removal.

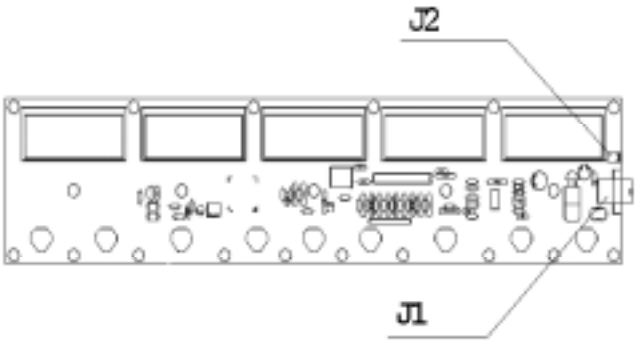
SECTION IV

ELECTRONICS OVERVIEW AND WIRING BLOCK DIAGRAMS

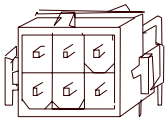
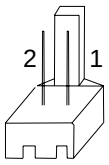
ELECTRONIC OVERVIEW – T810 CONSOLE

Functional Description

The T810 console is designed to act as an intelligent display and keypad interface. It is intended to work in conjunction with the Motor Control module to form the nucleus of the I/O and control system. The console board periodically reads the keypad input port to check for user inputs, updates and refreshes the status LEDs, data display, and communicates with the Motor Control module.



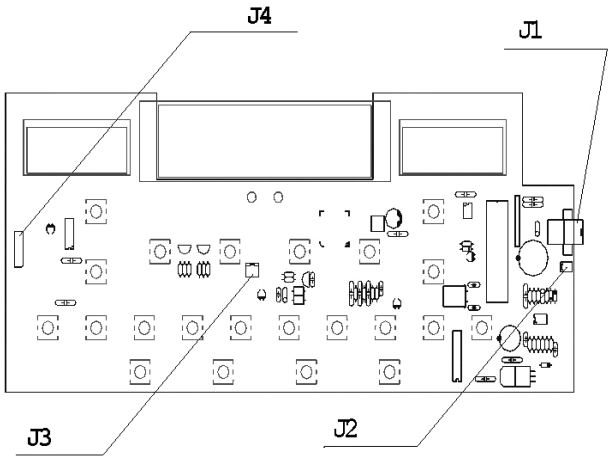
Connector and Pin Functions

Connector	Location	Pin	Functional Description
J1 is communication connector between console and motor controller.		1	Safety key
		2	Ground
		3	Ground
		4	Vcc
		5	Receive
		6	Send
J2 is Emergency stop connector.		1	Safety key
		2	Ground

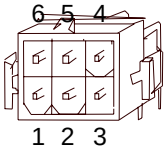
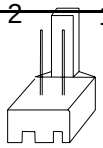
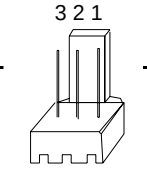
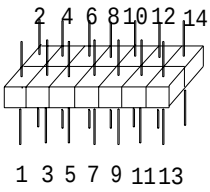
ELECTRONIC OVERVIEW – T830 CONSOLE

Functional Description

The T830 console is designed to act as an intelligent display and keypad interface. It is intended to work in conjunction with the Motor Control module to form the nucleus of the I/O and control system. The console board periodically reads the keypad input port to check for user inputs, updates and refreshes the status LEDs, data display, and communicates with the Motor Control module.



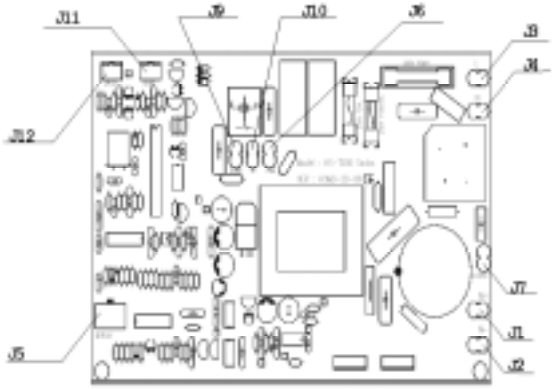
Connector and Pin Functions

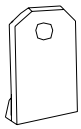
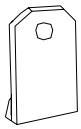
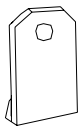
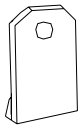
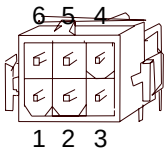
Connector	Location	Pin	Functional Description
J1 is communication connector between console and motor controller.		1	Safety key
		2	Ground
		3	Ground
		4	Vcc
		5	Receive
		6	Send
J2 is Emergency stop connector.		1	Safety key
		2	Ground
J3 is Heart rate receiver connector.		1	Pulse input
		2	Vcc
		3	Ground
			
J4 is voice board connector. (option)		1	SPA0
		2	SPA1
		3	SPA2
		4	SPA3
		5	SPA4
		6	SPA5
		7	SPA6
		8	SPA7
		9	SPA8
		10	SPCE
		11	SPPD
		12	SPEOM
		13	VCC
		14	Ground

ELECTRONIC OVERVIEW – MOTOR CONTROLLER PCB

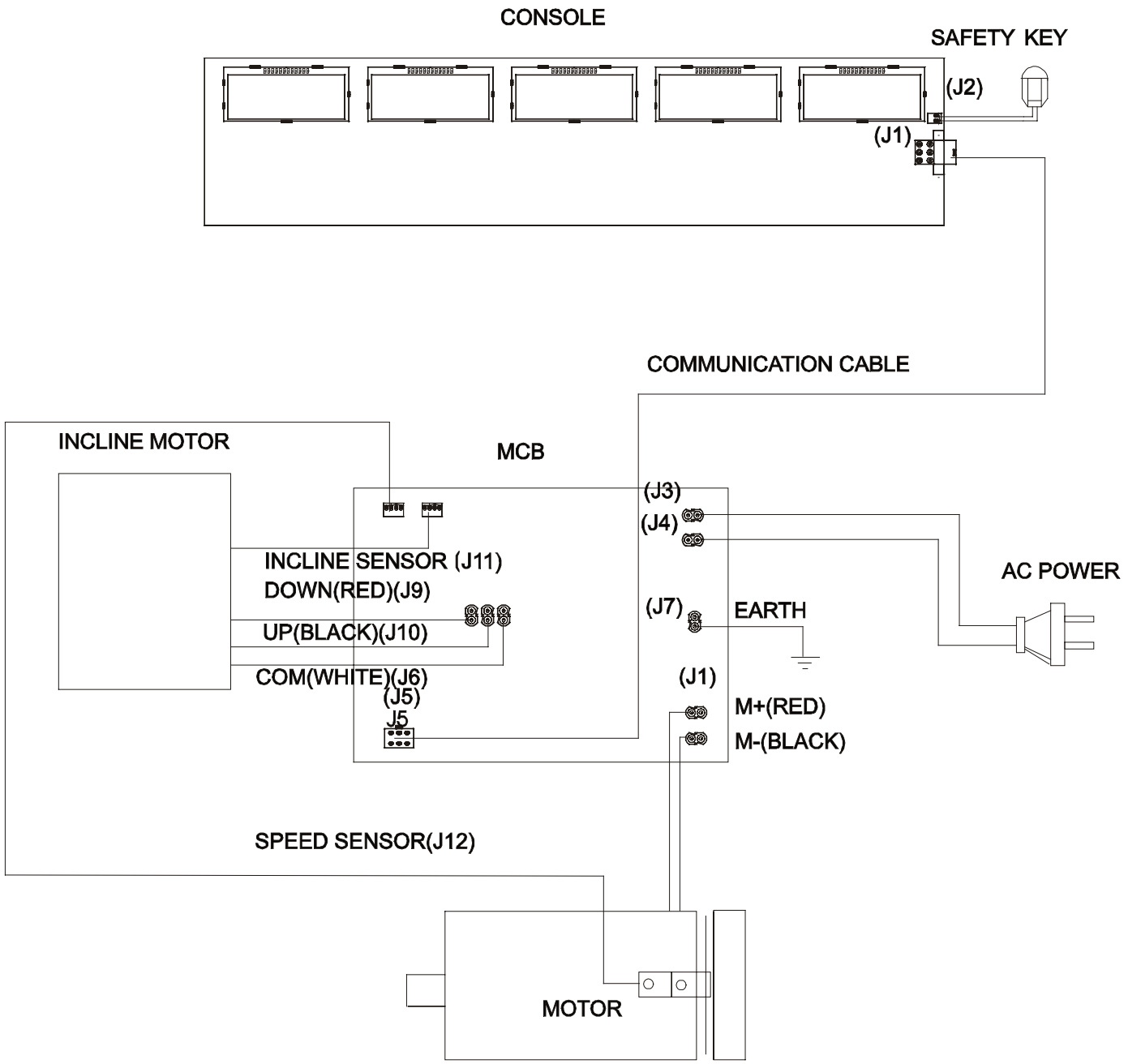
Functional Description

The Motor Controller PCBs are designed to act as an interface between the Drive motor, Display Console, and the Inline Motor. The desired belt speed and elevation is sent down to the motor controller and incline motor via the users selected input into the console. The motor is driven by a fixed frequency variable duty cycle signal. If an error condition is detected the main power relay receives its bus voltage from the console through the emergency pull switch. This relay can be energized by having the emergency pull switch is in its proper place. Opening of the relay does not remove power to the console or the logic on the motor control board, but will interrupt power to the incline and drive motors.

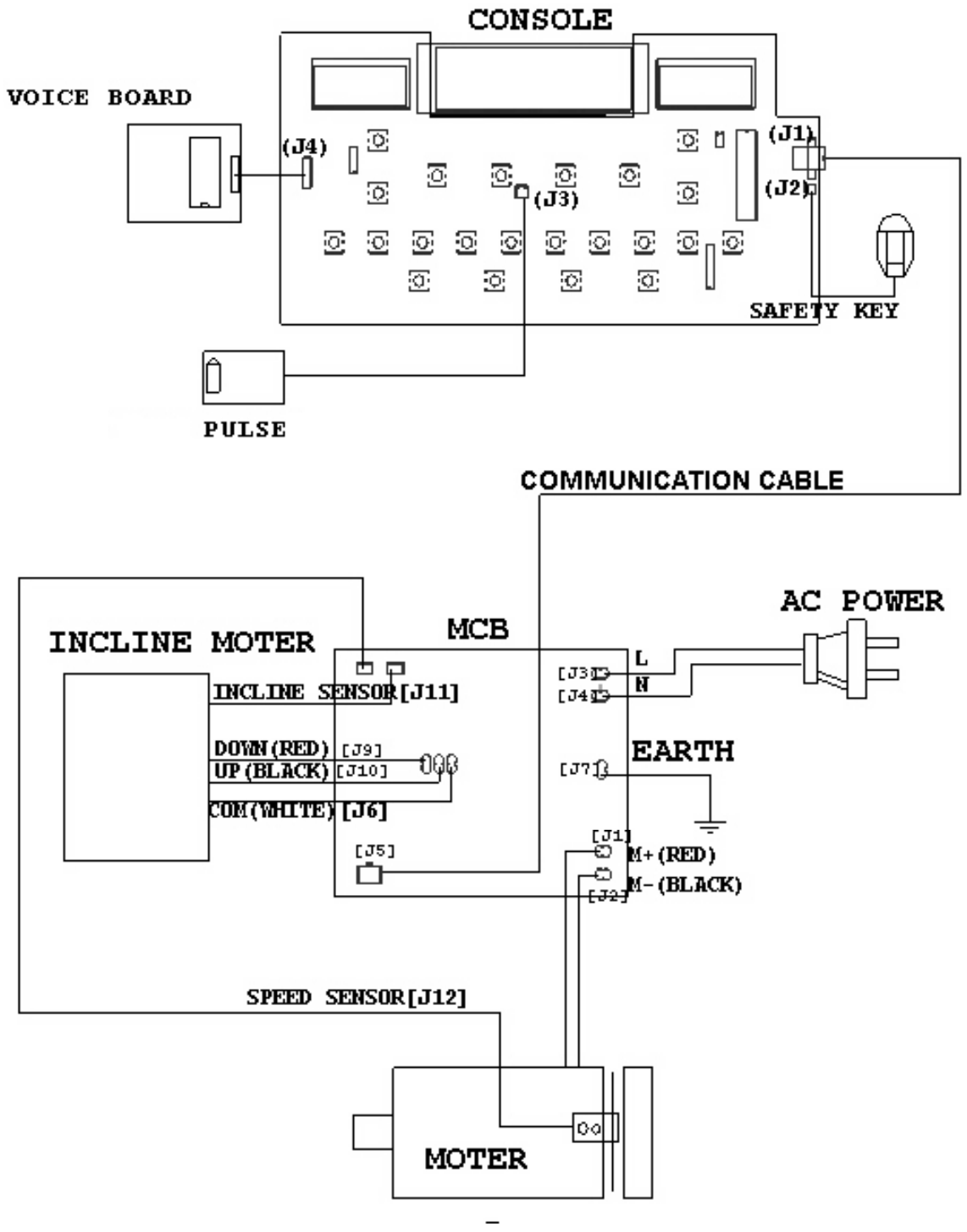


Connector	Location	Pin	Functional Description
J1 is DC MOTOR+ connector.		1	MOTOR+ (RED)
J2 is DC MOTOR- connector.		1	MOTOR- (BLACK)
J3 is AC INPUT L(Live) connector.		1	AC230V (L)
J4 is AC INPUT N(Neutral)connector.		1	AC230V (N)
J5 is communication connector between console and motor controller.		1	Safety key
		2	Ground
		3	Ground
		4	Vcc
		5	Receive
		6	Send

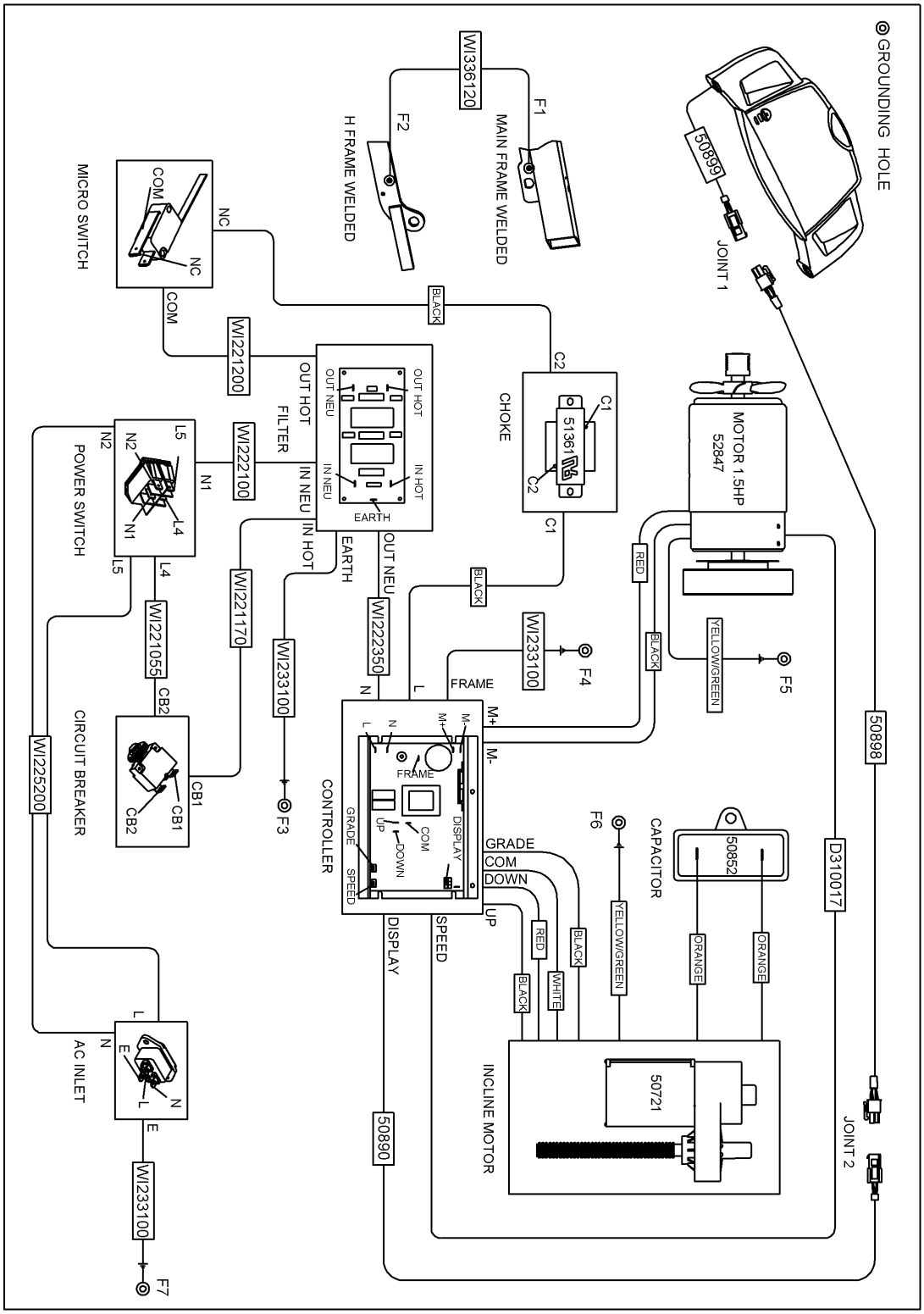
ELECTRONIC OVERVIEW – T810 BLOCK DIAGRAM



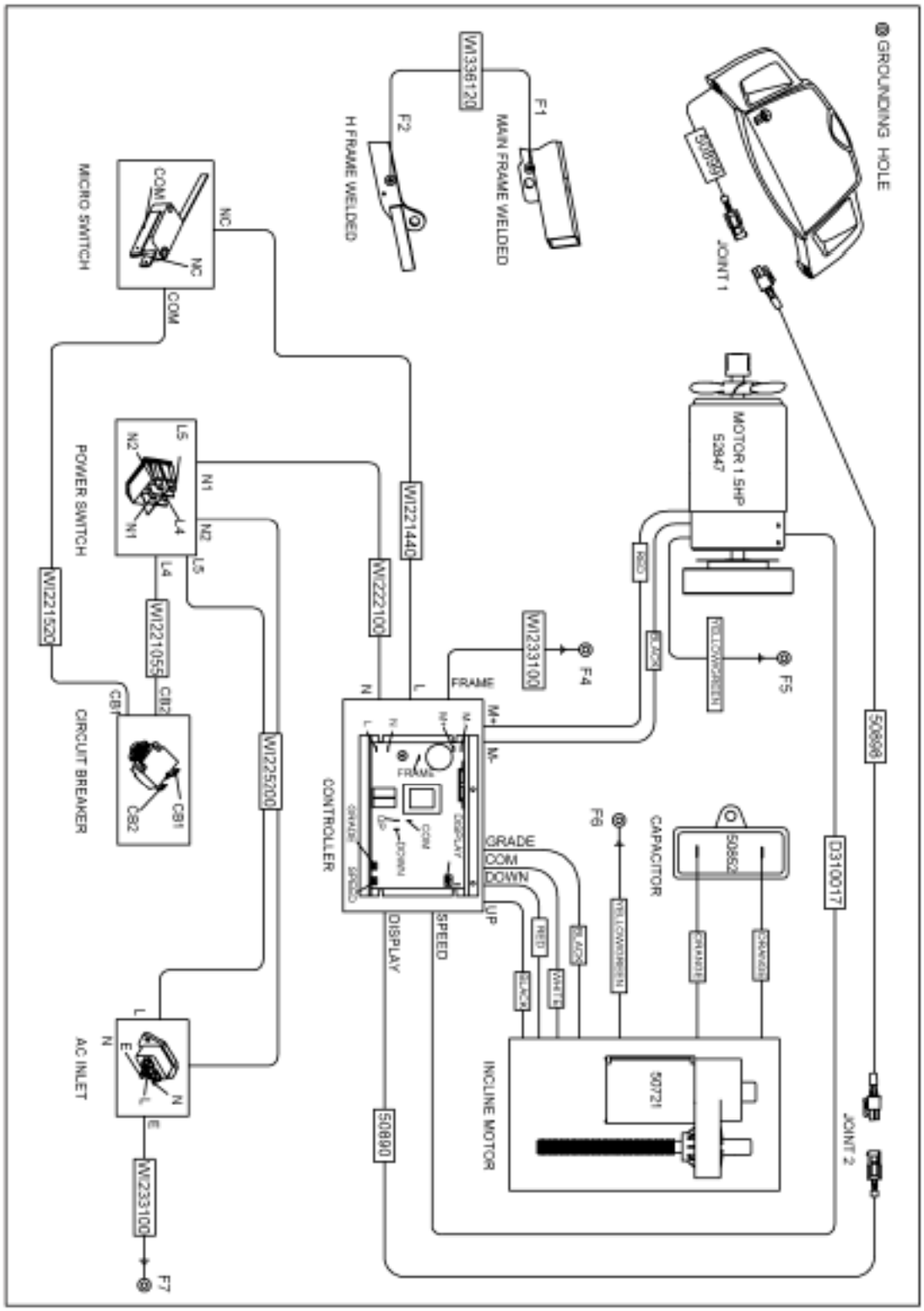
ELECTRONIC OVERVIEW – T830 BLOCK DIAGRAM



ELECTRONIC OVERVIEW – WIRING DIAGRAM (CE VERSION)



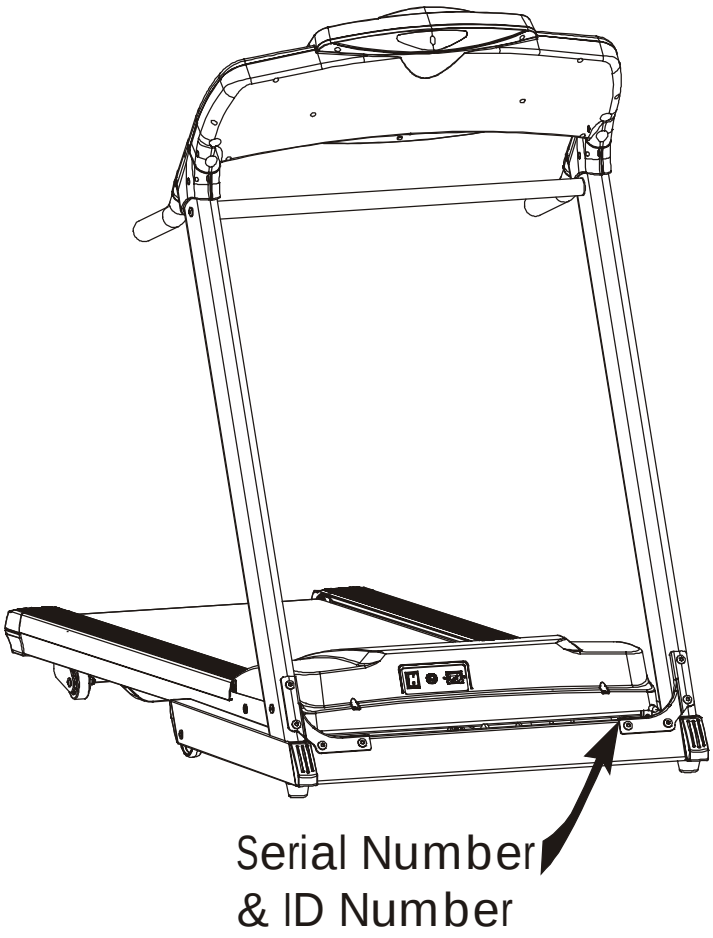
ELECTRONIC OVERVIEW – WIRING DIAGRAM (NONE CE VERSION)



SECTION V

MISCELLANEOUS INFORMATION AND SERIAL NUMBER LOCATION

Serial and Identification Number



Preventive Maintenance Schedule

Preventive Maintenance Schedule

ITEM	WEEKLY	MONTHLY	QUARTERLY	BI-ANNUAL	ANNUAL
DISPLAY CONSOLE ASSEMBLEY					
Hardware				Inspect	
Overlay	Clean			Inspect	
Emergency Switch/Key	Clean			Inspect	
HANDLEBAR ASSEMBLY					
Hardware				Inspect	
Handlebar				Inspect	
Side Hand Rails				Inspect	
FRAME ASSEMBLY					
Hardware				Inspect	
Motor Cover	Clean				
Drive Belt				Inspect	
Front Roller				Inspect	
Rear Roller				Inspect	

Life Fitness Sport and Essential Consumer Treadmills

UNPACKGING INSTRUCTIONS

1. Remove all banding from the corrugated shipping container. Carefully lift the top of the box (A) up and off the base tray (B) and over the treadmill (C).

2. Tear or cut the front corners of the base tray (B) and fold down the front flap of the base tray.

3. Lift and remove the front end support (D). Remove the ship kit box (E) from the treadmill deck and set aside. Remove the back end support (F).

4. Remove the plastic wrap from the treadmill.

5. Carefully lift the rear of the treadmill and slowly roll the unit forward off the base tray.

NOTE: BE SURE NOT TO DAMAGE THE LINE CORD WHEN MOVING THE TREADMILL OFF OF THE BASE TRAY.

6. Follow the Assembly Instructions included in the parts bag to complete the assembly of your treadmill.

INSALLATION INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS!

DON NOT position the rear of the treadmill within 6 feet (2 meter) of the nearest obstruction. The sides of the treadmill should maintain a minimum clearance of 8 inches (20 cm) from the nearest treadmill or other obstruction.

DO NOT locate the treadmill outdoors, near swimming pools, or in areas of high humidity.

DO verify the contents of the delivery carton against the accompanying parts listing prior to setting the cartons and shipping material aside. If any parts are missing, contact Life Fitness Customer Support Services at the number listed on the back page of this assembly instruction booklet.
Save the shipping cartons in case of return.

DO read the entire Operation Manual prior to attempting to operate this machine, as this is essential for proper use. The Manual explains how to properly use the treadmill and helps you to design an aerobic workout tailored to your personal fitness needs or requirements.

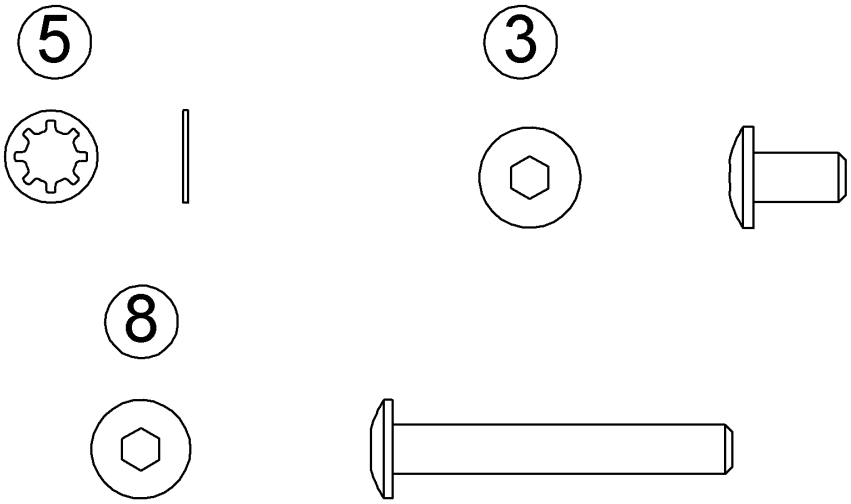
Life Fitness Sport and Essential Consumer Treadmills

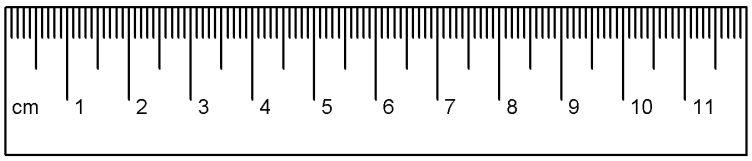
INSALLATION INSTRUCTIONS

TOOLS REQUIRED FOR ASSEMBLEY…6mm Allen Key (provided)

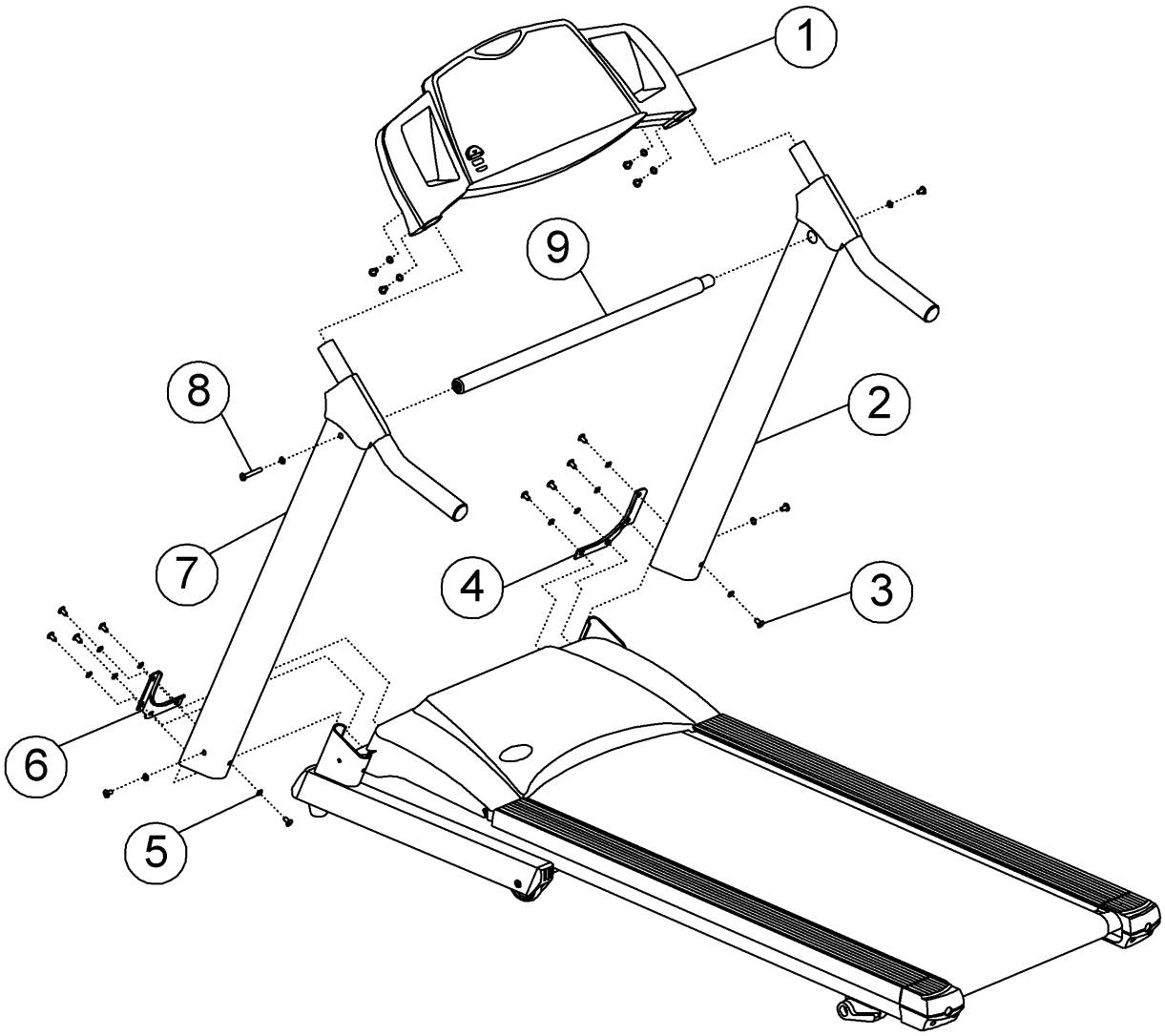
PARTS DESCRIPTION

1	CONSOLE **52436**	**Qty: 1**
2	RIGHT UPRIGHT POST	**Qty: 1**
3	MOUNTING BOLT (SHORT) **SC10815** M8x15mm	**Qty: 17**
4	RIGHT UPRIGHT POST SUPPORT BRACKET **53432**	**Qty: 1**
5	STAR WASHER **W308008**	**Qty: 18**
6	LEFT UPRIGHT POST SUPPORT BRACKET **53433**	**Qty: 1**
7	LEFT UPRIGHT POST	**Qty: 1**
8	MOUNTING BOLT (LONG) **SC40855** M8x55mm	**Qty: 1**
9	HORIZONTAL BAR **53328**	**Qty: 1**



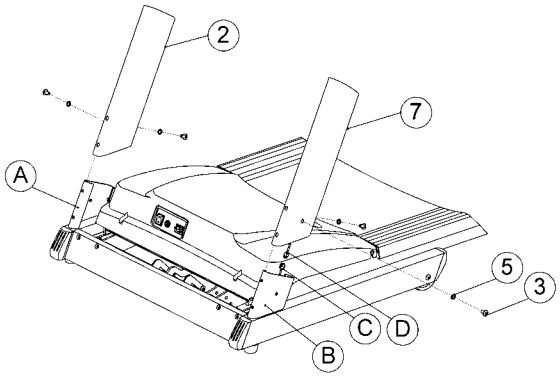


INSALLATION INSTRUCTIONS



INSALLATION INSTRUCTIONS - Continued

Only one tool is required to assemble the treadmill.
This tool is provided along with the bolt pack.
Keep the tool to tension the running belt in the future.



1. ASSEMBLE THE UPRIGHT POSTS (#2 & #7)

Connect the wires (C & D) before you assemble the upright posts. Locate each upright post (#2 & #7) on each upright post bracket (A & B). Secure each upright post (#2 & #7) with two bolts (#3) and two washers (#5).

Secure each side post support bracket (#4 & #6) with four bolts (#3) and four washers (#5).

NOTE: Do not tighten these bolts (#3) until the horizontal handlebar (#9) and console (#1) have been tightened.

NOTE: Tare care that the cables (C & D) do not get trapped or pinched

NOTE: Use star washer (#5) for each bolt (#3) connection.

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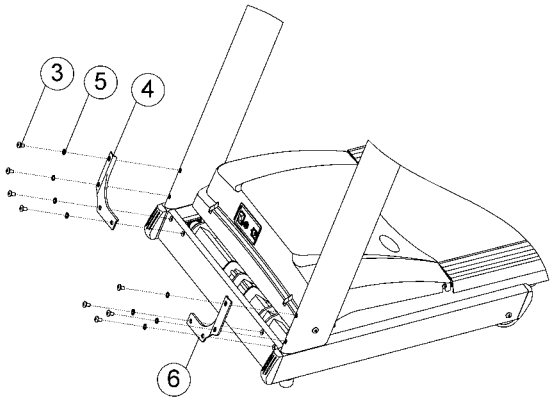


2. ASSEMBLE THE HORIZONTAL BAR (#9)

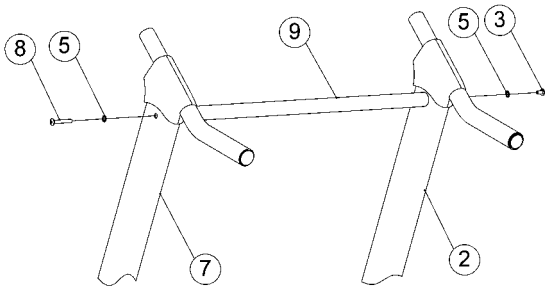
One end of the horizontal handlebar (#9) is not covered all the way with foam grip. Insert the uncovered end of the bar (#9) into right upright post (#2) first before fitting the other end flush against left side (#7).

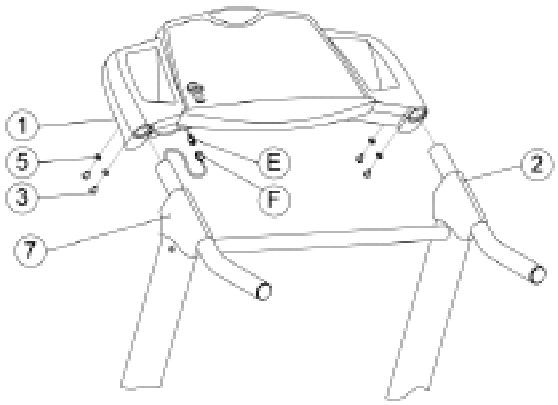
The left side of the horizontal bar (#9) is secured with the long bolt (#8) and the right side is secured with short bolt (#3).

3. NOTE: Do not tighten these bolts (#3) until the console (#1) has been tightened. ASSEMBLE THE CONSOLE (#1)

Connect the wires (E & F). Then push the console (#1) onto the upright posts (#2 & #7). You may have to shake the posts (#2 & #7) from side to side to get the console (#1) to fit.

Once you have the console (#1) in place, secure and tighten the bolts (#3) on the console (#1).





PRE-OPERATION CHECKLIST

- ✓ *Ensure that all fasteners are tight.*
- ✓ *Make sure the RUNNING BELT is properly tensioned and aligned according to the Operation Manual.*
- ✓ *Check the operation of the STOP switch and tether switch assembly. (See Operation Manual.)*
- ✓ *Confirm the display console is set to English or Metric units. (See Optional Settings ENGIMET in Operation Manual.)*
- ✓ *Read the entire Operation Manual before using the treadmill.*

If you would like to submit a part order, or if you need help troubleshooting a problem, we have included, for your convenience, a FAX form on the following page. Simply make a copy (or copies) of the FAX sheet and fill in the necessary information. You may FAX us at any time, 24 hours a day, to either of the numbers shown. A Life Fitness service representative will process your order, or respond to your problem, as quickly as possible.

NOTES

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Part No. #7414001

January 2003